

## **SUMMARY**

In December 2004, the NuMI Project Manager requested a review and report verifying NuMI Plant Facility Readiness. The scope of this task was to assess the readiness of the laboratory to assume responsibility for the physical plant of the NuMI facility as the project comes to completion. This task reviewed all aspects of the plant facility, and included discussions with staff from Facilities Engineering Services Section (FESS), Accelerator Division/ESH Building Management (AD/ESH), and Particle Physics Division/ESH Building Management (PPD/ESH).

In general, the responsible parties at Fermilab are well situated to take over operation of the facility from the NuMI Project. In a substantial way, maintenance and response has already been functioning successfully during the months since Beneficial Occupancy from the construction contractor. There remain some outstanding issues which deserve attention from the soon-to-be division building management.

The specific items reviewed and documented in this report, along with the status are:

COMPONENT REVIEWED	READINESS	OUTSTANDING ISSUES
Training for underground access	Satisfactory	Finalize training Inform about requirement
Normal underground access procedures	Satisfactory	Document & disseminate
Visitor underground access procedures	Satisfactory	Document & disseminate
Emergency underground access procedures	Satisfactory	Document & disseminate
Maintenance procedures for critical facility systems		
Underground ventilation system	Satisfactory	Include notification to shut off units req'd to Bldg Mgr prior to work (in CMMS & maintenance procedure)
Minos sump pumps	Satisfactory	Train shop personnel in procedure; get Minos crane operator training for maintenance workers; work out storing maintenance materials underground
Minos diesel pump	Excellent	
Emergency generators	Excellent	
Elevators	Satisfactory	Execute maintenance contract
Fire systems	Excellent	
Cranes	Excellent	
Maintenance activities and periodic testing of critical facility systems		
Electrical/Mechanical Equipment Maintenance	Excellent	
Minos sump pump system testing	Satisfactory	Develop plan for periodic testing of entire system to verify availability
Emergency power systems testing	Satisfactory	Develop plan for systems to be tested per NFPA 110 monthly under load
Elevators maintenance and testing	Excellent	
Cranes	Excellent	
Alarm notifications for critical facility systems		
Minos pump alarms	Satisfactory	Revise notification list
Underground ventilation supply alarms	Satisfactory	Revise notification list
Fire system alarms	Excellent	

## NuMI Plant Facility Readiness Assessment

Emergency response to critical system problems/failures		
Minos sump pumping system	Satisfactory	Document scenarios & appropriate responses, then train personnel.
Underground ventilation system	Satisfactory	Verify proper people for Duty Mechanic to contact if non-operational
Emergency generators	Excellent	
Implementation of Minos Pump Reliability Study assumptions	Satisfactory	Install ties and tags as part of final implementation work. Complete intended enhancements
Building Manager integration into facility operation	Satisfactory	Allow time for new Bldg Mgrs to work with existing Flr Mgrs and FESS/Ops & Eng to come to better understanding of systems and equipment
Periodic Inspection of Underground Facilities	Satisfactory	Set schedule and get consultant in place for baseline inspection

Transition of the plant facilities from NuMI Project to Fermilab Division ownership has been underway for several months. This process is moving towards completion, with mostly small details to be finalized. The building managers assigned to the facilities by AD and PPD are knowledgeable about facility management, are familiar with the lab's normal maintenance staff and systems, and should be able to assume their responsibilities quickly.

Responsibility for maintenance of these facilities was accepted by FESS when the construction was completed. Integration of the large amount of new NuMI equipment and systems into the standard Fermilab preventative maintenance process has taken time, especially with no increase in lab support for this effort. This effort is substantially complete.

Work continues towards completing final operational documentation. This includes access training and procedures, modifying emergency notification lists, and documenting emergency scenarios as summarized above. Particularly, as AD and PPD take ownership of the facilities, a final plan should be produced for periodic emergency power and sump pump system testing, for assurance of reliability of systems upon which the NuMI/Minos experiment depends for safety and continued operation. This plan should be the responsibility of the building management and the associated division ESH group, but will likely require implementation support from FESS/Ops.